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ABSTRACT

Key findings from the 1996 Ohio Education Supply and Demand Study are presented, covering the areas of current educator employment; enrollment and population; population projections; gender; race; age and experience; employment prospects; and long-term supply and demand outlook. Analysis of the data indicated: (1) the number of school-age children is expected to increase only very slightly over the next two decades; and (2) there will be an increased need for teachers during the first decade of the 21st century as a result of a large number of teacher retirements. The data are presented in four figures and two tables. (ND)

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ED 408 276

Educator Supply and Demand in Ohio

1996 Report Summary

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The task of a teacher is to help students become their own teachers.

No occupation means more to the future of this country than high quality educators. Thus, one of the most important responsibilities of the State Board of Education is to assure an adequate supply of highly qualified educators for the prekindergarten through grade 12 schools in the state. As a part of this work, the Ohio Department of Education collects data about the current and projected needs for certificated personnel in the various teaching fields and areas of specialization.

Educator supply and demand in the public schools depends on many factors, such as enrollment trends, subject-selection patterns, staffing ratios, employment practices, turnover rate, and the number of graduates from the teacher preparation institutions.

Some of the key findings of the 1996 Ohio Educator Supply and Demand Study are presented in snapshot format in the areas of current educator employment, enrollment and population, population projections, gender, race, age and experience, employment prospects, and long-term supply and demand outlook.

Predictions

A review of the current educator supply and demand information leads to the following conclusions: 3

The number of school-age children is expected to increase only very slightly over the next two decades.

There will be an increased need for teachers during the first decade of the next century as a result of a large number of educator retirements.

Education & Employment

4 **Teachers in Public Education in Ohio**

79,358 Regular Teachers (about 30% working in secondary schools)
12,899 Special Education Teachers
8,357 Vocational Educators
6,559 Education Service Personnel Teachers (art, music, and physical education)
2,934 Tutors/Small Group Instructors

110,107 Total Teachers

Other Educators in Public Education in Ohio

5,858 Superintendents, assistant superintendents, principals, and assistant principals

7,006 Other administrators such as administrative assistants, interns, supervisors, and coordinators

8,071 Support personnel (curriculum specialists, counseling, library/media, remedial specialists, audio-visual staff)

Enrollment and Population

The most important influence on enrollments in Ohio is the number of births. As indicated in Figure 1, the number of live births has fallen since a peak in 1957. The decline in births was reflected in a decline in enrollment that began in 1972 and continued until 1985.

Since then, enrollment in public schools has been approximately 1.8 million. Enrollment in private schools followed approximately the same pattern — declining until the mid-eighties and remaining stable at about 220 thousand since then.

Figure 1
Live Births in Ohio

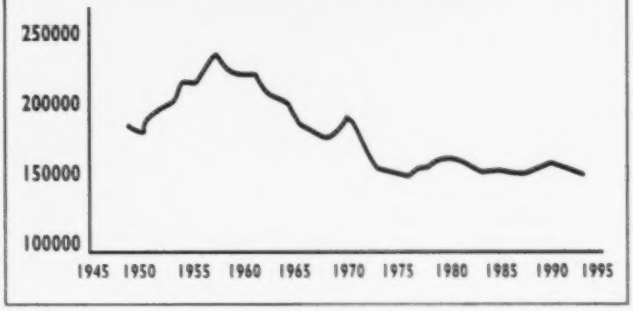
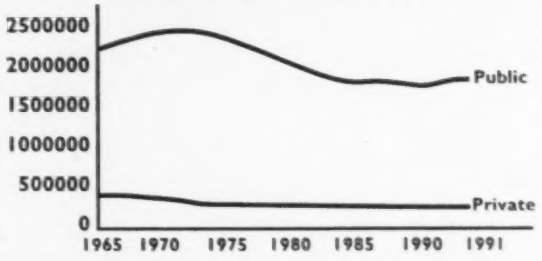


Figure 2
Enrollment in Ohio Schools
(Public and Private)



Population Projections

The 1990 Ohio population of 10.8 million is projected to increase to 11.75 million by 2015.

The median age of the population is expected to continue increasing, and the proportion of people aged 0 - 14 years is expected to decline (although the number in this age group will increase).

The elementary and middle school population, 5 - 14 years of age, is projected to increase before the year 2005. The actual number was 1,561,900 in 1990, and this age group is projected to be 1,567,800 in 1995, 1,595,700 in 2000, and 1,603,300 in 2005. The numbers are expected to decrease in the years from 2005 to 2010.

The high school age group, 15-19 years of age, also is projected to increase. These numbers will go from 793,919 in 1990 to 821,900 in 2000, and 852,000 in 2015. (Ohio Department of Development, Office of Strategic Research, *Population Projections, Ohio Counties by Age and Sex: 1990 to 2015*, January 1993, p.5.)

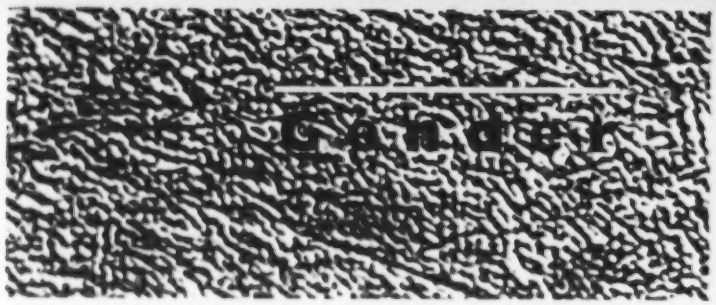
The overall number in the 5-19 age group is not predicted to change significantly (growing by less than 4 percent over the next two decades). The implication for enrollment and teacher demand is that the long-term demand for teachers is not likely to change significantly.

However, there is one age group that is larger than other groups — people aged 0 - 4 in 1995. In Table 1, this higher population group will become the 5 - 9 age group in the year 2000, 10 - 14 age group in year 2005, and 15 - 19 age group in the year 2010.* Therefore, there will be a temporary surge in teacher demand as this group of students moves through the school system.

Table 1: Ohio's Population and Population Projections by Age
(1980 and 1990 Actual Population, 1995 - 2015 Projections)

	Year						
Age in Years	1980	1990	1995	2000	2005	2010	2015
0-4	787,150	785,149	815,600*	794,900	788,708	811,300	840,400
5-9	821,480	795,135	779,700	816,200*	792,100	792,000	812,100
10-14	886,625	766,822	788,100	779,500	811,200*	794,700	791,400
15-19	1,007,679	793,919	798,600	821,900	822,200	857,700*	852,000

Sources: 1980 and 1990 population, Census of Population (General Population Characteristics). 1995-2015 projections, *Population Projections, Ohio and Counties by Age and Sex*, Office of Strategic Research, Ohio Department of Development, January, 1993.



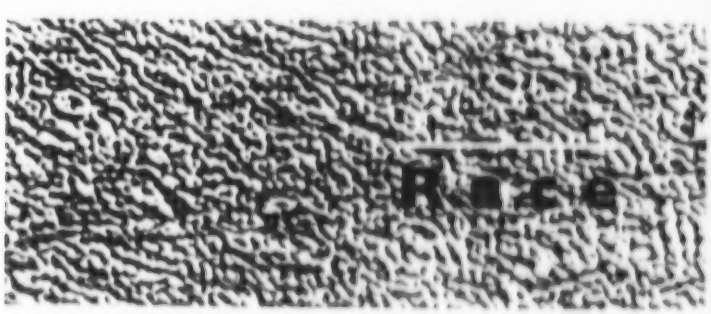
Nearly all kindergarten teachers (3,436 females, 28 males) and more than 80 percent (41,670 females, 10,176 males) of the elementary teachers are women.

Many more men than women are in administrative positions in elementary schools (2,053 males, 1,292 females).

At the secondary level, the numbers of men and women teachers are almost equal (12,350 males, 11,528 females), but there are more than twice as many men at the assistant principal level (581 males, 213 females), and there are six times as many men at the level of principal (658 males, 110 females).

Only six percent of superintendents are women (673 males, 43 females).

Most librarians are female (1,556 females, 201 male), and women greatly outnumber men in special education (11,040 female, 1,859 males) — particularly at the elementary level.



Whites account for 93.1 percent of employees — most of the other employees (6.2 percent) are African American. To put these figures into context, white students account for about 83 percent and African American students account for almost 15 percent of total enrollment in public schools.

Minority representation in administrative positions is much higher than in regular teaching or support services: 10 percent of administrative positions are held by non-white employees. Minority representation is strongest at the assistant principal level; at the level of superintendent, minority representation is only just over one percent.

8 The average age of teachers in elementary education is 43.2 and the average number of years of experience is 14.6. There is not an even distribution of elementary school teachers across age groups, as Figure 3 clearly shows. In particular, there are many teachers aged between 44 and 50 — almost one third (32.5 percent) of elementary teachers are in this range.

Figure 3
Elementary Teachers' Age

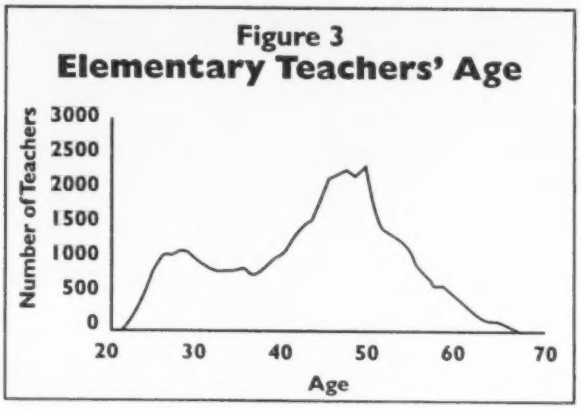
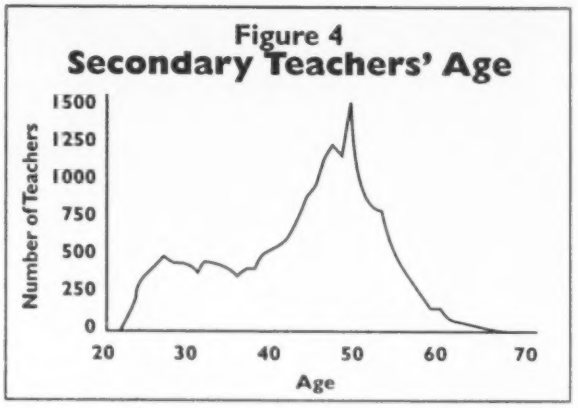


Figure 4
Secondary Teachers' Age

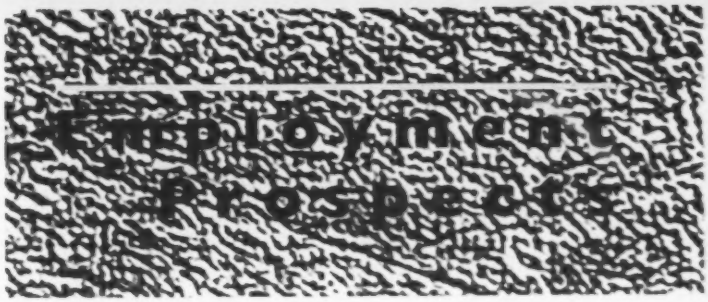


In recent years, the average age of retiring teachers has been 58 years. (*1995 Benefits Summary, 75th Anniversary Report*, State Teachers Retirement System of Ohio.)

An indication of the number of teachers likely to retire is given by the number of teachers approaching this age. We can expect teachers from the 44-50 age group to begin retiring in the first few years of the next century. At that time, the teaching profession is projected to lose many of its members.

To illustrate how these projected retirements might affect elementary school teaching positions, assume that teachers work for 28 years. (The average number of years of service was 28.0 in 1993 and 1994, and 27.8 in 1995, *1995 Benefits Summary*, State Teachers Retirement System of Ohio.) In 1996, there were 56,700 elementary school teachers. If there were an even age distribution, about 2,025 elementary school teachers could be expected to retire each year. There are almost 3,000 teachers aged 49, so in one year there could be almost 1,000 additional teachers retiring. Over a seven-year period, 14,175 retirements could be expected if the age distribution were even. There are 18,423 elementary school teachers in the 44-50 age group, so over a seven-year period (ending in about 2010) it is reasonable to predict that there will be about 4,250 additional retirees from elementary teaching.

The picture is similar in secondary education. In this sector, the average age is 43.6 and the average number of years of experience is 15.9. The age distribution of secondary school teachers is also uneven, as Figure 4 clearly shows — 35.7 percent are between 44 and 50. With an even age distribution and a 28-year teaching career, 5,530 retirements from secondary school teaching could be expected over a seven-year period ending (in about 2010) and an additional 2,360 retirees from secondary teaching as the 44-50 age group retires.



In elementary education, over the period 1994-96, the supply of new certificates to recent graduates of Ohio colleges and universities was approximately equal to the number of new teachers hired, therefore, at present the area appears to be in overall balance. However, this does not mean that recent graduates are guaranteed employment — many of the new positions were filled by people with experience. In fact, less than half the new teachers employed had no experience. In other words, most positions are filled by people returning to teaching or transferring from other sectors of education. One of the main difficulties in assessing employment prospects is that there are no figures on the size of the pool of potential teachers.

In secondary education, the supply of new certificates was more than twice the number of new teachers employed. However, because secondary school teachers are often certificated in more than one area, it is difficult to assess employment prospects accurately.

In assessing the employment prospects in subject areas, an area with a value between 1.5 and 2 for the ratio "supply to new" is described as average. Because many positions are filled by teachers with experience, this study also takes into consideration the ratio of the supply of teachers to the number of teachers employed who had zero experience. In assessing the employment prospects for beginning teachers, an area of value between 2 and 3 for the "ratio of supply to zero experience" is described as having average employment prospects for beginning teachers.

Overall job prospects are clearly good in most areas of special education, music, Spanish, and in vocational education. For beginning teachers, the brightest prospects are in similar areas (although lack of experience may be a barrier to employment in vocational education).

Considering the largest areas of employment, i.e., those areas employing more than one thousand teachers, the three areas with poor overall employment prospects are art, English, and social studies. Beginning teachers also face poor prospects in art, English, and social studies, and may also have difficulty finding employment in physical education and life science (where most new hires are experienced).

Table 2: Summary of Employment Prospects in Teaching (1994-96)

	1994-96 Ratio Supply to New Hires	Overall Prospects	1994-96 Ratio Supply to Zero Experience	Prospects for Beginning Teachers
Elementary	1.13	(See Text) Good	2.59	(See Text) Average
Elementary or Secondary				
Art	2.91	Very Poor	6.08	Very Poor
Physical Education	1.22	Good	4.12	Very Poor
Music	0.97	Very Good	2.81	Average
Secondary				
Business	1.18	Good	3.10	Poor
English	2.50	Poor/Very Poor	5.61	Very Poor
Foreign Language				
French	2.39	Poor	8.61	Very Poor
German	1.74	Average	3.64	Poor
Spanish	1.21	Good	2.25	Average
Health	2.24	Poor	6.30	Very Poor
Industrial Arts	1.02	Good	2.83	Average
Math	1.46	Good	2.94	Average
Science				
Earth Science	1.03	Good/Very Good	2.31	Average
Life Science	1.96	Average	3.67	Poor
Chemistry	0.90	Very Good	2.35	Average
Physics	3.04	Very Poor	12.17	Very Poor
Social Studies	2.55	Very Poor	6.01	Very Poor
Special Education				
Preschool	1.23	Good	3.11	Poor
Gifted Children	0.81	Very Good	2.56	Average
Multi Handicapped	0.93	Very Good	2.07	Average
Hearing	3.26	Very Poor	6.58	Very Poor
Orthopedically	0.77	Very Good	1.53	Good
Severe Behavior	0.53	Very Good	1.20	Good
Developmental	1.05	Good	2.12	Average
Specific Learning	1.23	Good	3.17	Poor
Vocational Education				
Agriculture	0.84	Very Good	3.07	Poor
Business	1.58	Average	10.26	Very Poor
Home Economics	0.45	Very Good	2.49	Average
Trade and Industry	1.07	Good	3.80	Poor

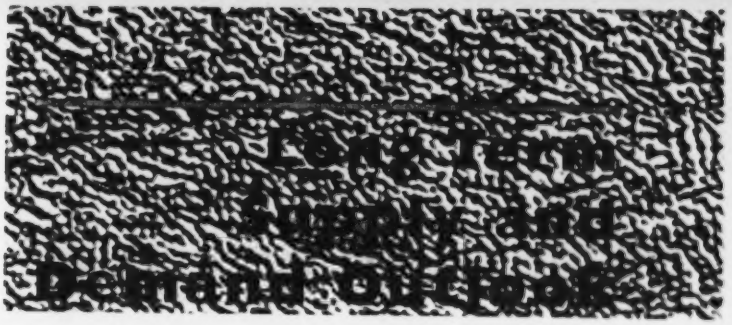
Scales used to assess employment prospects in subject areas

Ratio of Supply to New Hires

Below 1.0	Very Good
1.0 to 1.5	Good
1.5 to 2.0	Average
2.0 to 2.5	Poor
Above 2.5	Very Poor

Ratio of Supply to Zero Experience

Below 1.0	Very Good
1.0 to 2.0	Good
2.0 to 3.0	Average
3.0 to 4.0	Poor
Above 4.0	Very Poor



There will be a slight increase in the demand for elementary school teachers over the next decade as a result of an increase in the number of school-age children, as shown in Table 1.

The demand will then stabilize. Population projections suggest that the number of children aged between 5 and 14 will be roughly the same in 2015 as in 2005 (1.6 million).

However, retirements will lead to a fall in the overall supply of teachers. After the turn of the century, it is projected that there will be an increase in the need for elementary teachers as a result of the large number of elementary teacher retirements. The increased need for replacement elementary school teachers will continue until about 2015.

After the turn of the century, as the 5-9 age-group in 2000 begins to enter secondary school, there will be a slight increase in the demand for secondary school teachers.

In addition, there will be a fall in the supply of secondary school teachers as a result of retirements. We predict that there will be an increased need for secondary school teachers after the turn of the century, mainly as a result of the large number of secondary teachers who will be retiring.

The increased need will continue until about 2015 and will probably affect all areas of specialization. Two of the areas that have good short-term employment prospects, special education and music, may be affected slightly less by retirement than other areas because the age of teachers in these areas is lower than the overall average.

The main influence on employment prospects in education will most likely come from teacher retirements, rather than from changes in enrollment. Many teachers are between 45 and 50 years old. If, on average, teachers continue to retire at age 58, there will be a large number of teachers retiring in the first decade of the next century. These retirements will create a demand for replacement teachers.

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Copies of the complete study are available from the Ohio Department of Education, Division of Teacher Education, Certification, and Professional Development, 65 South Front Street, Room 1009, Columbus, Ohio 43215-4183.

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